REMARKS

Claims 1-17 were pending. Claims 6, 7, 9-11 and 15-17 were withdrawn from consideration by the Examiner as being directed to non-elected inventions. Claims 8 and 12-14 are canceled without prejudice. Claim 1 is amended. New claims 18-22 are added. Support for the amended claim is found throughout the specification at, *inter alia*, page 8, paragraphs 1 and 2; page 12, third paragraph; the original claims, and the Example. Claims 1-5 and 18-22 are pending. No claim is allowed.

Rejection Under 35 U.S.C. § 102(b)

Claims 1-3, 8 and 12-14 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by CA Appl. No. 2,312,109 (Dubois). According to the Examiner, Dubois discloses PDX, a potent furin inhibitor in pharmaceutical compositions for the treatment of inflammatory and erosive disease that include pulmonary fibrosis, abnormal wound healing and arthritis. Applicants traverse this rejection.

Applicants respectfully submit that Dubois fails to anticipate the claimed methods because it fails to teach each and every element of the claimed subject matter. The test for anticipation is one of strict identity. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 63 U.S.P.Q.2d 1597 (Fed. Cir. 2002). Scarring resulting from a fibrotic disorder is not encompassed by the currently claimed methods. The claimed methods relate to the treatment of scarring that is not related to a fibrotic disorder or condition, *i.e.*, normal scarring. Dubois discloses that pulmonary fibrosis and abnormal wound healing are exemplary "erosive diseases". This is because both pulmonary fibrosis and abnormal wound healing result from degradation of extracellular matrix through actions of cells associated with the disease. For example, in abnormal wound healing, erosive disease results in a continuous degradation of extracellular matrix to form a chronic, non-healing (*i.e.*, abnormal) wound. In contrast, the normal scarring process involves an accumulation of extracellular matrix components at a site of injury that does not result from or involve a fibrotic condition. Dubois is silent regarding the use of furin inhibitors to reduce, inhibit, or prevent normal scarring as in the claimed methods or the use of furin inhibitors that specifically inhibit TGF-β activation. Therefore, Dubois fails to anticipate the claimed methods.

For at least these reasons, the rejection is overcome and may be removed.

Rejection Under 35 U.S.C. § 103(a)

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dubois in view of Pearton et al., Exp. Dermatol. 10:193-203 (2001). The Examiner alleges that Pearton discloses the elected species decanoyl-RVKR-cmk. Applicants traverse this rejection.

Applicants respectfully submit that the cited combination of Dubois and Pearton fail to render the claimed methods *prima facie* obvious. As discussed above, Dubois fails to teach or suggest the use of furin inhibitors in reduction, treatment or prevention of normal scarring during wound healing. Pearton fails to correct this deficiency as it discloses only that decanoyl-RVKR-cmk appears to play a role in differentiation of keratinocytes in the epidermis. Thus, the cited combination of references fails to teach each and every element of the claimed methods.

Even assuming *arguendo* that the cited references disclosed all of the claimed elements, a person of ordinary skill in the art would find no motivation or common sense basis to support combining the disclosures of these references to result in the claimed methods. In short, Dubois discloses the use of furin inhibitors in situations where chronic conditions result in abnormal wound healing. Dubois describes chronic conditions, in which the prolonged influence of cytokines on the inflammatory response eventually gives rise to a disease state in which extracelluar matrix is degraded and tissue structure compromised. This is quite distinct from the normal scarring response to wounding of the claimed methods, where acute action of cytokines (including, *e.g.*, TGF-β1 and TGF-β2 released as a sudden bolus from de-granulating platelets) establishes a local milieu in which cells are stimulated to deposit extracellular matrix. Thus, Dubois appears to suggest that furin inhibitors (such as PDX) may be of benefit in the treatment of chronic conditions over a protracted period of time. Pearton fails to provide any additional motivation that would suggest using furin inhibitors to inhibit the normal scarring response in the absence of a fibrotic condition as Pearton focuses exclusively on the activity of a single furin inhibitor on terminal differentiation of keratinocytes in the skin. Applicants note that the allegedly shared cell permeability feature would not be enough to inform a person of ordinary skill in the art to use the inhibitor in an application (*i.e.*, in normal scarring response) that is not disclosed in either reference. In view of such

disclosure, a person of ordinary skill in the art would find no motivation to combine these references or to reasonably expect that such inhibitors would be useful as claimed.

For at least these reasons, the rejection is overcome and may be removed.

Rejection Under 35 U.S.C. § 112, first paragraph - written description

Claims 1-4, 8 and 12-14 are rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. According to the Examiner, the claims include any and all furin inhibitors for reducing a variety of scars during healing of wounds, reducing fibrosis in the treatment of any and all fibrotic conditions or disorders, and also in preventing or inhibiting formation of fibrosis or scars including at sites where a wound or fibrosis may form or occur. Applicants traverse this rejection.

The specification shows that the inventor had possession of the claimed methods at the time of filing. The pending claims are drawn to a discrete class of furin inhibitors that inhibit the activation of TGF-β. The specification includes a working example that details assays to detect inhibitors of extracellular TGF-β activation as well as showing the effectiveness of several exemplary compounds. The specification describes exemplary compounds as well as guidance on identifying other compounds useful in the claimed methods. See the specification at pages 9-10. Moreover, the role of TGF-β in wound healing is known in the art and discussed in the specification. *Id.* Applicants further not that the claimed methods lie in the discovery that a particular class of enzymes (one of which is furin) contributes to scar formation through the activation of TGF-β. Thus, if enzymes such as furin are inhibited, less TGF-β is activated and scarring can be reduced. See, e.g., the specification at page 8-9. In sum, the specification provides sufficient detail and guidance to show that Applicants had possession of the invention at the time of filing. Nothing more is required.

For at least these reasons, the rejection is overcome and may be removed.

Rejection Under 35 U.S.C. § 112, first paragraph -enablement

Claims 1-4, 8 and 12-14 are rejected under 35 U.S.C. § 112, first paragraph as the specification allegedly fails to provide reasonable enablement for the claimed methods. The

Examiner asserts that the specification does not provide reasonable enablement for a method in the healing of wounds and reducing fibrosis by applying a furin inhibitor to a site where a wound may form or fibrosis may occur. The Examiner acknowledge that the specification enables a method for reducing scarring or reducing fibrosis by applying a furin inhibitor to a site of a wound or fibrotic disorder. Applicants traverse this rejection.

Applicants respectfully submit that the specification provides reasonable enablement for the claims as amended. As acknowledged by the Examiner, the specification provides reasonable enablement for reducing scarring by applying a furin inhibitor to a wound site. Applicants note that the new claims are directed to inhibiting or preventing scarring by applying a furin inhibitor to a site where a surgical wound is to be formed. In other words, the furin inhibitor would be administered to a wound site to achieve a similar or the same effect as if administered to a pre-existing wound site. In view of the disclosure provided, Applicants submit that the specification's guidance is applicable to these methods as well. Thus, the specification reasonably enables these claims.

For at least these reasons, the rejection is overcome and may be removed.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 255352001800. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: December 21, 2007

Respectfully submitted,

By: /Laurie L. Hill/
Laurie L. Hill, Ph.D.
Registration No.: 51,804
MORRISON & FOERSTER LLP
12531 High Bluff Drive, Suite 100
San Diego, California 92130-2040
(858) 720-7945